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54 An automatic machine to refill, decant and fill substances such as washing lotions, cremes, washing powders, softeners, bath agents, cleaning agents, vinegar, oils, mustard etc.

57 An automatic machine to refill, decant and fill substances such as washing lotions, cremes, laundry detergent powder, softeners, bath agents, cleaning agents, vinegar, oils, mustard etc. An automatic machine to refill, decant and fill substances such as washing lotions, creme, laundry detergent powder, softeners, bath agents, cleaning agents, vinegar, oils, mustard etc., characterized by the fact that different care/cleaning agents are poured into and taken from empty user-supplied containers or rented containers. The units have several pumps made of plastic or metal and the drive is provided by electric motors for 220, 24, 12, 6 volt or by solar power. The different agents and substances are suctioned through hose systems, in which are installed metal or plastic filters. The substances are transported by way of an electric, electronic and mechanical control and adjustment device and are piped through filler pipes with measurement sensors (with automatic shut-off) into the containers. Each filling area has an on and off switch (round, with corners, oval or other forms and colors). The units are controlled electrically, electronically or mechanically with switch systems and with digital display. To offer a change in cleaning the different containers, there is a system with a cleaning chamber/compartment with several cleaning nozzles, holding, stop and spring clamps, safety slider, flap, rolling door with safety circuit and with audible and visible signal (when the cleaning process is completed). Each chamber and compartment has an external drain with separately designated containers. Different call/report systems are located above, on and in the unit. Below it are located several transport rollers with an indicator. Below, above and on the side are arranged storage places for rented containers. On the side is arranged a container collection system for containers that can no longer be used. When the containers are too large, an extension hose is screwed or pushed onto the refill and fill tubes. The material is obtained by inserting coins, credit cards or by payment at the cashier (print-out showing content and description of the agent and its weight in ml or grams). For a certain use, such as employees of a certain industry requiring hand lotions, washing lotions etc., the substance can be obtained and controlled with the employee ID card or without it, using the honor system. The area may be monitored with surveillance cameras.

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Description

Automatic machine for the dispensing of washing lotions, cremes, washing powders, softeners, bath lotions, cleaning agents, vinegar, oils, mustard etc.

It was noted that different industrial branches, departments etc. provide different washing lotions, cremes, foot care agents etc. in different containers of different sizes and of different materials. Empty containers constitute garbage. That translates to cost for their separate collection and disposal. Furthermore, this increases costs, time required to buy new containers and to dispense the different agents. In the area of private use/sales, a garbage problem is created by the empty containers and one thus faces the cost related to collection, transport and reuse.

The invention indicated in the protection claim allows the different industries/branches to provide their employees with containers at or in the automatic filler machines that are cleaned, disinfected and refilled as required. The containers may be labelled "Fill or refill the containers/We are all saving money" to encourage multiple use. Information, written slogans, symbols and drawings are displayed to encourage the use of the unit in accordance with the invention. To control and monitor the material consumption, the operation, control and monitoring are achieved with the company ID cards/company stamps, payment and possibly with surveillance cameras. Monitoring and controlling can generally be based on the honor system. With respect to a private use for wholesale and small businesses with different automatic machines, payment is made with coins/cards or the agents are paid for at different cashiers.

The invention ensures that the user fills the containers with the different substances/agents. This substantially reduces the amount of garbage and an economical advantage is achieved since the containers can be refilled/filled several times from different large containers (rented containers).

An advantageous design of the unit in accordance with the invention consists of the fact that the unit is fitted with an audible and visible sensor to indicate weight (grams/ml) and content. In different operations/industries that provide their employees with washing lotions/cremes etc., it is possible to use a refill/fill system (replace empty with full containers) or a simple system consisting of decant/fill container via cock, with installation room and drain collection area with instructions/comments on usage. The unit in accordance with the invention can be made large or small according to requirements. For private use, the units can be installed in the open with different security and protection systems such as doors, electronic, electrical and mechanical safety devices, protection and operation and mainly with protective grids. The housing of the unit may be made of steel, aluminum, plastic or of other material combinations.

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A design form will be explained with the help of Figure 1.

Figure 1. Lines/pumps 1, large container containing different substances 2, panel for instructions/information 3, visible problem and function lights 4, audible signal to indicate a problem 5, cleaning and disinfecting area 6, cleaning nozzles 7, 8, 9, electric/electronic/mechanical safety switch 10, door 11, handle 12, container for the disposal of damaged containers 13, disposal opening 14, area to accommodate rented containers 15, 16, handle 17, hinges 18, "On"-switch 19, switch system/emergency "Off"-switch 20, substance designation 21, filling/refilling clamp 23, drains 24, power connection 25, transport rollers with indicator 26, coin and/or card slot 27.

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Protection claims

An automatic machine to refill, decant and fill substances such as washing lotions, cremes, laundry detergent powder, softeners, bath agents, cleaning agents, vinegar, oils, mustard etc.

An automatic machine to refill, decant and fill substances such as washing lotions, cremes, laundry detergent powder, softeners, bath agents, cleaning agents, vinegar, oils, mustard etc. is characterized by the fact that different care/cleaning agents are filled into empty user containers or rented containers from differently designated automatic units. The units have several pumps made of plastic or metal and the drive is provided by electric motors for 220, 24, 12, 6 volt or by solar power. The different agents and substances are suctioned through hose systems, in which are installed metal or plastic filters. The substances are transported by way of an electric, electronic and mechanical control and adjustment device and are piped through filling pipes with measurement sensors (with automatic shut-off) into the containers. Each filling area has an on and off switch (round, with corners, oval or other forms and colors). The units are controlled electrically, electronically or mechanically with switch systems and with digital display. To permit cleaning of the different containers, there is a system with a cleaning chamber/compartment with several cleaning nozzles, holding, stop and spring clamps, safety slider, flap, rolling door with safety circuit and with audible and visible signal (when the cleaning process is completed). Each chamber and compartment has an external drain with separately designated containers. Different call/report systems are located above, on and in the unit. Below the unit are located several transport rollers with indicator. Storage places for rented containers are arranged below, above and on the side of the unit. On the side is also arranged a container disposal system for containers that can no longer be used. When the containers are too large, an extension hose is screwed or pushed onto the refill and fill tubes. The material is obtained by inserting coins, credit cards or by payment at the cashier (print-out showing content and description of the agent and its weight in ml or grams). For a certain application such as employees of a certain industry requiring hand lotions, washing lotions etc., the substance can be obtained and controlled with the employee ID card or without it, using the honor system. The area may be monitored with surveillance cameras.

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Fig. 1